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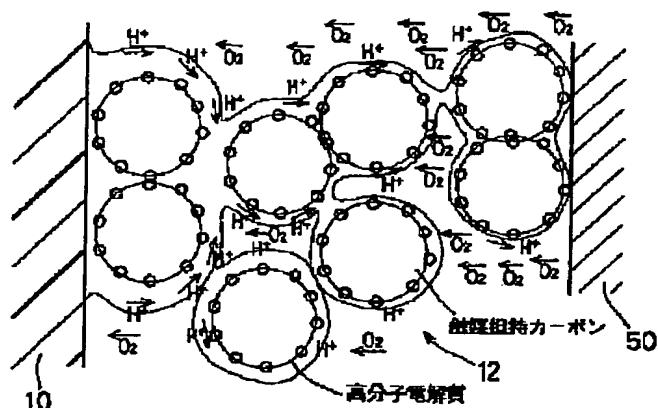
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APPLICANT : TOYOTA MOTOR CORP;

INVENTOR : MIZUNO SEIJI;

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TITLE : FUEL CELL AND MANUFACTURE THEREOF



ABSTRACT : PURPOSE: To further enhance layer the battery performance.

CONSTITUTION: Electrode catalyst layer forming paste prepared by mixing a catalyst carrying carbon in a polymer electrolyte solution and an organic solvent is dripped on the surface of a Teflon sheet, and a paste printed material with uniform thickness is formed with a doctor blade. When the paste printed material stands within a sealed container, the catalyst carrying carbon is precipitated and stacked on the Teflon sheet. The polymer electrolyte solution is left as a supernatant liquid of the stacked layer. When a thin film is formed by drying, on the upper surface side of the film, the amount of the polymer electrolyte is increased and voids between the catalyst carrying carbon particles are made small, and on the bottom side of the film, the amount of the polymer electrolyte is decreased and the voids are made large. The film becomes an electrode catalyst layer formed by stacking the catalyst carrying carbon particles, and the side having the large amount of polymer electrolyte is brought into close contact with an electrolyte film 10, and the side having large voids is brought into close contact with a cathode 50. The conductivity of hydrogen ions on the interface with the electrolyte film is enhanced, and the diffusion permeability of a reaction gas on the interface with an electrode is enhanced.

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